

IMAGE CAPTURE: DANFUNG TALKS ABOUT HIS CAMERA

I've been inundated with questions asking what camera rig was used, so I will keep this technical to try to answer them. The Canon 5D Mark II is capable of unprecedented image quality, but since it is a stills camera, there are several limitations that I had to address before using this camera in a warzone.

The first problem is with audio. I used a Sennheiser ME-66 shotgun mic and G2 wireless system running into a Beachtek DXA-2s (I've since upgraded to a Juicedlink DT-454), which converts professional XLR mics into a minijack suitable for the 5D. I built custom aluminum 'wings' to hold this audio setup.

The second problem is stabilization. The design of the Canon 5D Mark II makes hand-held video shooting difficult. I mounted my whole system onto a Glidecam 2000 HD with custom rubber pads on the mount and a foam earplug to suppress the vibration of the lens. The rig is very heavy and it took about two months to get my arm strong enough to shoot extended shots. I cut up a Glidecam Body Pod to make it fit with my body armor and used it to rest my arm when I was not shooting.

To achieve a cinematic look when shooting in bright daylight, I shot at f2.8 at 1/60th or slower, which requires a drastic amount of reduction of light that hits the sensor. I used a Singh Ray Variable ND filter. While the filter can reduce the amount of light by 2 to 8 stops, I had serious problems with uneven coverage, so part of my frame would be darker than others. I have tried Fader ND filters, but also have the same problem.

Another issue is that all focus must be done manually after recording begins. The only way to address this was a lot of practice racking focus. I was not able to rack focus when running, so I often had to try to stay the same distance from my subject to keep them in focus. The most frustrating problem was that the camera would overheat after about 15 minutes of continuous shooting in 120-degree heat. I had no option other than to turn it off and let it cool. I did not have a spare body.

When I returned to the US, I completely rebuilt my rig to make it as small and compact as possible so that I could work unobtrusively while in intimate situations with Nathan and Ashley. I used a Zacuto Stryker rig with custom mounts to hold the audio equipment and a custom follow focus built from a skateboard wheel by Bruce Dorn. While I had almost entirely used a single lens - a Canon 24-70mm f/2.8 - which provided versatility during combat in Afghanistan, I shot primarily with a Canon 35mm f/1.4 and a Canon 50mm f/1.2 while shooting in North Carolina. These prime lenses provided exceptional image quality and performance in low light.

The final serious problem is that the files straight out of the camera are difficult to edit with. I used a 2.93 GHz Macbook Pro 17in, 256gb SSD HD, 4 GB RAM and convert the files into Apple Prores 422 HQ using Compressor (the program often crashes when handling many files, but the quality is better than with mpeg streamclip). I used two 8TB Sonnet D400QR5's set at RAID 5 to store the 100 hours of footage and Prores files.

I carried five 16 GB Sandisk Extreme IV cards and so many various batteries that I often felt like I was powering a small space station.

--Danfung Dennis